

Over the years, parties unwilling to provide proper transmission media for reasons of cost have sought the right to utilize power lines. Low power amplitude modulated limited service area broadcasts are an example of such services granted by the FCC in the past. Such transmissions were generally limited to within a large building, such as a college dormitory, at very low power so that interference would not occur to existing AM broadcast reception beyond the dormitory.

Power lines will radiate a substantial fraction of the radio frequency power placed upon them, and as little as one watt will be detectable, and thereby cause interference, miles from the power lines.

In the past it was judged unreasonable, because of the obvious interference problem, to grant the right to use power lines to transmit radio frequency communications. The interference problems remain in effect at this time. Therefore it now remains unreasonable for the FCC to grant the right to place radio frequency transmissions on the power lines.

Every person in the radio frequency communication business has at one time or another looked at power lines and wished that he/she could utilize them for communication transmission lines. This has been true for nearly a hundred years now. Such utilization would simply interfere with the standard radio services because the power wires efficiently radiate radio frequency power. Granting the right to use the power wires is tantamount granting the right to widely broadcast on that frequency just as if one used a normal antenna.

Although many parties would have liked to use the power wires, few have asked for the right to do so because they understood it to be an unreasonable request. It remains an unreasonable request today and should be denied.

The interference problem today is worse than it was years ago. Many solid state devices with non-linear "I-V" response to radio frequency voltage are now attached to the 60-Hertz power wires. These devices create noise at harmonics of the primary frequency, being especially intense within the first ten, or so, harmonics. The radio frequency power on the power wires will thereby generate substantial noise at multiple harmonics of the primary radio frequency. This noise will be efficiently radiated to interfere with existing services on the harmonic frequencies. To grant the right to use power wires as radio frequency transmission media is more unreasonable today than it was in past years.